

**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Application Review

Issue Date:

Region: Raleigh Regional Office
County: Northampton
NC Facility ID: 6600074
Inspector's Name: Sindy Huang
Date of Last Inspection: 03/14/2019
Compliance Code: 3 / Compliance - inspection

Facility Data	Permit Applicability (this application only)
<p>Applicant (Facility's Name): Pleasant Hill Compressor Station</p> <p>Facility Address: Pleasant Hill Compressor Station 2784 NC 48 Hwy Pleasant Hill, NC 27866</p> <p>SIC: 4922 / Natural Gas Transmission NAICS: 48621 / Pipeline Transportation of Natural Gas</p> <p>Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V</p>	<p>SIP: 02D .0516, .0521, .1111 NSPS: NA NESHAP: ZZZZ PSD: NA PSD Avoidance: NA NC Toxics: NA 112(r): NA Other:</p>

Contact Data			Application Data
Facility Contact	Authorized Contact	Technical Contact	<p>Application Number: 6600074.19A Date Received: 10/11/2019 Application Type: Renewal Application Schedule: TV-Renewal</p> <p style="text-align: center;">Existing Permit Data</p> <p>Existing Permit Number: 09186/T03 Existing Permit Issue Date: 08/20/2015 Existing Permit Expiration Date: 07/31/2020</p>
Heather Anderson Environmental Advisor (540) 465-6425 34646 Old Valley Pike Road Strasburg, VA 22657	Leland Johnston Manager of Operations (804) 773-2484 1596 Baxter Road Prince George, VA 23875	Mili Patel Senior Environmental Engineer (832) 320-5895 700 Louisiana Street, Suite 700 Houston, TX 77002	

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2018	---	10.07	0.2000	16.90	0.0900	0.0928	0.0928 [Formaldehyde]
2017	---	18.02	0.3000	30.30	0.1600	0.1667	0.1667 [Formaldehyde]
2016	---	22.78	0.3800	38.27	0.2000	0.2103	0.2103 [Formaldehyde]
2015	---	10.67	0.2100	17.87	0.0900	0.0979	0.0979 [Formaldehyde]
2014	---	9.54	0.2000	15.99	0.0900	0.0875	0.0875 [Formaldehyde]

<p>Review Engineer: Eric Crump</p> <p>Review Engineer's Signature: _____ Date: _____</p>	<p style="text-align: center;">Comments / Recommendations:</p> <p>Issue 09186/T04 Permit Issue Date: Permit Expiration Date:</p>
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1. Purpose of Application

Pleasant Hill Compressor Station (PHCS) is a natural gas compressor station located in Pleasant Hill, Northampton County, North Carolina. The facility operates under Title V Permit No. 09186T03 with an expiration date of July 31, 2020. PHCS has applied for renewal of their facility's air quality permit. The renewal application was received on October 11, 2019, which is at least six months prior to the expiration date. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

Through permit application No. 6600074.19A, PHCS included the following change to the existing permit: addition of a 250-gallon horizontal above-ground wastewater storage tank (Source ID No. IA-A06) to the list of insignificant activities.

2. Facility Description

The PHCS receives natural gas via pipeline, compresses it, and transmits the gas via pipeline to facilities downstream. The station typically compresses 1 - 1.3 million cubic feet per hour of natural gas. The pressure within the pipeline typically ranges from 500 to 775 pounds per square inch. The facility will raise the pressure of natural gas it receives to the higher end of the range when needed. The gas received at the station is free of any odorants; for safety purposes, the station adds a very small quantity of mercaptan odorant to the gas before downstream transmittal.

The station has four reciprocating engines—three natural gas-fired compressors and one natural gas-fired generator—which comprise the main emission sources. In addition to the generator, other auxiliary equipment at the station includes storage tanks for ethylene glycol, lube oil, mercaptan, and wastewater, a natural gas-fired boiler, and a parts washer-degreaser. Since 2004, gas production is typically curtailed from April to November.

3. Application Chronology

August 20, 2015	Permit No. 09186T03 issued to PHCS as a Title V renewal.
January 27, 2016	Compliance inspection conducted by Will Wike, Raleigh Regional Office (RRO). Facility appeared to be operating in compliance with all permit requirements.
December 15, 2016	Compliance inspection conducted by Will Wike, RRO. Facility appeared to be operating in compliance with all permit requirements.
June 26, 2018	Compliance inspection conducted by Will Wike, RRO. Facility appeared to be operating in compliance with all permit requirements.
March 14, 2019	Compliance inspection conducted by Dawn Reddix, RRO. Facility appeared to be operating in compliance with all permit requirements.
October 11, 2019	Permit renewal application received by RRO.
November 18, 2019	Draft of revised permit sent to RRO and PHCS for review prior to public notice.
November 22, 2019	Comments on draft permit received from RRO.
December 3, 2019	Comments on draft permit received from PHCS.

4. Permit Modifications and Title V Equipment Editor (TVEE) Discussion

The following table summarizes changes to the PHCS permit resulting from the permit renewal:

Page No.	Section	Description of Changes
Cover and throughout	---	<ul style="list-style-type: none"> Updated all dates and permit revision numbers Changed all citations of 15A NCAC 2D to 15A NCAC 02D Changed all citations of 15A NCAC 2Q to 15A NCAC 02Q
Insignificant Activities List	Attachment	<p>Addition of Source ID No. IA-A06, One horizontal above-ground wastewater storage tank (250 gallon capacity)</p> <p>Removed Source ID No. IA-A05, One horizontal above-ground ethyl mercaptan odorant storage tank (3,327 gallon capacity)</p>
3	1	Removed the word “Subpart” from the “Emission Source ID No.” column
5	2.1 A.3.a	Added definition to the acronym “4SRB”
	2.1 A.3.f	Added definition to the acronym “IC”
	2.1 A.3.f	Added definition to the acronym “RICE”
6	2.1 A.3.1.iv	Changed “condition j” to “Section 2.1 A.3.j”
	2.1 A.3.1.v	Changed “condition k” to “Section 2.1 A.3.k”
	2.1 A.3.m	<ul style="list-style-type: none"> Moved sentence “The Permittee shall be deemed in noncompliance . . .are not met.” to Section 2.1 A.3.o Conditions c and m changed to Sections 2.1.A.3.c and 2.1.A.3.n
7	2.1 A.4.h, i	Changed “condition g” to “Section 2.1 A.4.g”
8	2.1 A.4.m	<ul style="list-style-type: none"> Deleted the phrase “emergency demand response” Renumbered former paragraphs (1), (2), and (3) as i, ii, and iii Renumbered former paragraphs (2)(i) through (iv) as ii.(A) through (D), combined paragraph (B) into (A), and deleted paragraphs (C) and (D) Renumbered former paragraphs (3)(i)(A) through (E) as iii.(A)(1) through (5)
	2.1 A.4.m(3)	Deleted the phrase “emergency demand response”; changed “paragraph m(3)(i)” to “Section 2.1 A.4.m(3)(i)”

Page No.	Section	Description of Changes
9	2.1 A.4.m(3)	<ul style="list-style-type: none"> Added reference to 40 CFR 63.6640(f) at end of section Moved sentence “The Permittee shall be deemed in noncompliance . . .are not met.” to Section 2.1 A.4.n Changed “conditions in c through m” to “conditions in Sections 2.1.A.4.e through m”
	2.1 A.4.p.iv	Changed “condition k” to “Section 2.1 A.4.k”
	2.1 A.4.p.v	Changed “condition l” to “Section 2.1 A.4.l”
	2.1 A.4.p.vi	Divided paragraph p into two parts - 2.1 A.4.p.vi and 2.1 A.4.p.vi(A); changed “m(2)(ii) or (iii)” to “Section 2.1 A.4.m(3)(i)”
	2.1 A.4.q	New section created for requirements formerly in paragraph p for keeping records suitable and readily accessible for at least 5 years
	2.1 A.4.r	New section created for requirements formerly in paragraph p deeming the Permittee to be in noncompliance if requirements are not met
10	2.1 A.4.s, t, u	Current stipulations of reporting requirements added, replacing reporting requirements formerly in paragraph q.
11-20	3	Updated General Conditions to Version 5.3 dated August 21, 2018

The following changes were made to the Title V Equipment Editor (TVEE):

- Added Source ID No. IA-A06: One horizontal above-ground wastewater storage tank (250 gallon capacity).
- Removed Source ID No. IA-A05, One horizontal above-ground ethyl mercaptan odorant storage tank (3,327 gallon capacity).

5. Description of Changes and Estimated Emissions

As mentioned earlier, the PHCS renewal application included the addition of a 250-gallon horizontal above-ground wastewater storage tank (Source ID No. IA-A06) to the list of insignificant activities. The pipeline liquids identified in the wastewater are benzene, ethylbenzene, hexane (-n), toluene, and xylenes (mixed isomers), which are hazardous air pollutants (HAP). PHCS submitted an emissions report for the wastewater tank generated with the U.S. Environmental Protection Agency’s TANKS emissions estimation software, version 4.09D (October 5, 2006). The annual uncontrolled emissions from the wastewater tank are summarized below.

Emission Components	Annual Losses (pounds)		
	Working Loss	Breathing Loss	Total Emissions
Benzene	1.59	1.74	3.33
Ethylbenzene	0.15	0.16	0.31
Hexane (-n)	2.60	2.84	5.44
Toluene	0.45	0.49	0.95
Xylenes (mixed isomers)	0.12	0.14	0.26
All Pipeline Liquids	4.92	5.32	10.29

As shown, the emissions of each HAP from the wastewater tank are significantly less than 1000 pounds per year, so the tank meets the definition of an insignificant source in 15A NCAC 02Q .0503(8).

No changes have occurred at the PHCS facility affecting emissions. This permit renewal does not affect this status. Continued compliance is expected.

6. Regulatory Review

PHCS has been subject to the following 15A NCAC 02D regulations:

- .0516, Sulfur Dioxide Emissions from Combustion Sources
- .0521, Control of Visible Emissions
- .1111, Maximum Achievable Control Technology

The facility has not become subject to any additional regulations since the last permit renewal, and remains subject to the regulations listed above. Therefore, a specific regulatory review will not be included in this application review. The regulations listed above and associated specific conditions still apply. Continued compliance with the above regulations and the associated specific conditions is expected. The permit has been revised to reflect the most current stipulations for all applicable regulations.

7. National Emission Standards for Hazardous Air Pollutants (NESHAPS): Maximum Achievable Control Technology (MACT) and Generally Available Control Technology (GACT)

PHCS is not a major source of hazardous air pollutants. The three natural gas-fired compressors (**ID Nos. ES-15301, ES-15302, and ES-15303**) and the natural gas fired emergency generator (**ID No. ES-153G1**) are subject to the area source requirements in 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants from Stationary Reciprocating Internal Combustion Engines. This permit renewal does not affect this status. The area source requirements for the facility have not changed since the last renewal.

Continued compliance is expected.

8. New Source Performance Standards (NSPS)

PHCS is not subject to any NSPS. This permit renewal does not affect this status.

9. New Source Review (NSR)/Prevention of Significant Deterioration (PSD)

PHCS is located in Northampton County, which has triggered increment tracking under PSD for PM₁₀, SO₂, and NO_x. However, the facility is not subject to any requirements under PSD/NSR. This permit renewal does not consume or expand increments for any pollutants. Continued compliance is expected.

10. Risk Management Program (Clean Air Act, Section 112(r))

40 CFR Part 68 requires stationary sources storing more than threshold quantities of regulated substances to develop a risk management plan (RMP), in accordance with Section 112(r) of the Clean Air Act. The RMP lists potential effects of a chemical accident, steps the facility is taking to prevent an accident, and emergency response procedures to be followed if an accident occurs.

PHCS is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any regulated substances in quantities above the thresholds in the rule. This permit renewal does not affect the 112(r) status of the facility.

10. Compliance Assured Monitoring (CAM)

40 CFR Part 64 requires a continuous CAM plan be developed for any pollutant specific unit if that unit:

- is located at a major source required to obtain a 40 CFR Part 70 or Part 71 permit;
- is subject to an emission limitation or standard for a regulated air pollutant;
- uses an active control device to comply with that emission limitation or standard; and
- has potential pre-control potential emission rate exceeding the major source threshold (100 tons/year for criteria pollutants, 10 tons/year of a single HAP, or 25 tons/year of multiple HAPs.

CAM was determined in a preceding permit review to not be applicable because PHCS does not use any active control devices to comply with emission limitations or standards. The permit renewal does not affect the facility's status with respect to compliance assurance monitoring (CAM)

11. Facility-wide Toxics Review

The facility is not currently subject to NC Air Toxics requirements, as it has never triggered a toxics review. This permit renewal does not affect this status.

12. Facility Emissions Review

The table in the header page of this review summarizes emissions for PHCS. There have been no changes in emissions from the facility.

13. Compliance Status

PHCS was last inspected on June 26, 2018 by Will Wike of the Raleigh Regional Office. The station appeared to be in compliance with all applicable requirements at that time.

14. Public Notice/EPA and Affected State(s) Review

A notice of the DRAFT Title V Permit shall be made pursuant to 15A NCAC 02Q .0521. The notice will provide for a 30-day comment period, with an opportunity for a public hearing. Consistent with 15A NCAC 02Q .0525, the EPA will have a concurrent 45-day review period. Copies of the public notice shall be sent to persons on the Title V mailing list and EPA. Pursuant to 15A NCAC 02Q .0522, a copy of each permit application, each proposed permit and each final permit shall be provided to EPA. Also, pursuant to 02Q .0522, a notice of the DRAFT Title V Permit shall be provided to each affected State at or before the time notice is provided to the public under 02Q .0521 above. Virginia is an affected state within 50 miles of the facility. There are no affected local programs within 50 miles of the facility.

15. Other Regulatory Considerations

A Professional Engineer seal was not required for Permit Application No. 6600074.19A.

No zoning consistency determination was required for Permit Application No. 6600074.19A.

No permit fee was required for Permit Application No. 6600074.19A.

16. Recommendations

DAQ has reviewed the permit application for Pleasant Hill Compressor Station located in Pleasant Hill, Northampton County, North Carolina to determine compliance with all procedures and requirements. DAQ has determined that this facility is complying or will achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. DAQ recommends the issuance of Air Permit No. 09186T04.